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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,632	03/11/2004	Michael V. Shuman	N0186 US	6665

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NAVTEQ NORTH AMERICA, LLC  
222 MERCHANDISE MART  
SUITE 900, PATENT DEPT.  
CHICAGO, IL 60654

EXAMINER
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RENDON, CHRISTIAN E

ART UNIT	PAPER NUMBER
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3714

MAIL DATE	DELIVERY MODE
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08/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/798,632

Applicant(s)

SHUMAN ET AL.

Examiner

Christian E. Rendón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6-25, 28, 29 and 38-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-25, 28, 29 and 38-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

This office action is in response to the amendment filed August 21, 2007 in which applicant has canceled claims 4-5, 26-27 and 30-37, amended claims 1, 6-17, 23-25 and 28-29, added claims 38-41, and responded to the claim rejections. Claims 1-3, 6-25, 28-29 and 38-41 are still pending.

### ***Claim Rejections - 35 USC § 102***

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3, 7-8, 10-13, 15-16, 20, 23-24 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Graf et al. (US 4,645,459).**

1. Graf discloses a computer controlled imaging system that constructs a scene in real-time from a library of images (Abstract). Graf discusses an aircraft flight simulation (FS) as one of the many possible applications for the invented system (col. 1, lines 15-17). The FS system contains a visual subsystem for a vehicle simulator (col. 1, line 25) that receives flight data from the FS computer and terrain data from a 'gaming area' database (col. 1, lines 17-21) and creates a scene from the perspective of the pilot in the cockpit of the aircraft (col. 1, lines 21-24). The visual simulator uses the terrain and flight path or vehicle control data (col. 1, lines 36-40) to determine the location and viewing direction of the visual system of the vehicle (col. 7, lines 12-14). The scenes viewed by the pilot can comprise of images that are fictitious or represent real-life places from anywhere around the world (col. 4, lines 40-41). The scenes are constructed in three phases: land, water and sky surfaces (col. 5, line 20). The land surface can comprise of trees, houses, roads, lights, rocks (col. 5, lines 22-23), mountains, lakes (col. 10, line 11), rivers, etc (col. 10, line 24). However not every scene makes use of all the available objects therefore the final results, a 'gaming area' or a template (col. 1, lines 20-21) database comprises of a smaller set of data from the main or source database. The source or

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object database comprises of several smaller databases, but only three are relevant for this office action: 2D, 3D-one axis and 3D-two axis (col. 10, lines 38-44). The 2D database contains images of railroad tracks, roads, creeks, streams (col. 14, line 33), streets, sidewalks, building fronts, etc (col. 14, lines 42-43). The system is able to manipulate or transform the size, position, rotation, etc all of these objects based on the control functions (col. 8, lines 14-21). The controllers perform the control functions, like determining the intensity of each object based upon range (col. 7, lines 55-56) between the object and the aircraft. The 3D databases contain three-dimensional objects like larger buildings, ships, tanks and other points of interest (col. 5, line 61-64).

2. Based on the discussion above, Graf discloses the applicant's limitations of claims 1-3, 12-13, 15-16, 20, 23-24, 29, 38 and 41. Graf discloses a source database that contains geographic features such as roads, a template database that contains a smaller set of data from the source, and this template provides navigation-related functions. The navigational functions discussed by Graf are vehicle positioning (col. 4, line 55) and the display of a 'gaming area' or map of a fictitious or real world location (col. 4, line 41) at a high level of accuracy and detail (col. 6, lines 55-57) of its geographical features (Fig. 1) containing natural structures like 2D rivers or man-made structures like 3D buildings. Aircraft flight simulators, which are considered a video game, inherently incorporate other navigational functions that were not or briefly mentioned like velocity, acceleration, time, altitude changes (col. 4, line 55), an enemy aircraft or points of interest (col. 5, lines 62-63) on the radar, etc that are found in vehicles like aircrafts that require a navigation system like a radar. Furthermore, the phrase "calculating at least one parameter that characterizes a geographic aspect of the real-world region" can be interrupted to mean several different features disclosed in the art. Graf discloses the 'gaming area' or template area is defined as covering an area of 25 to 100 square miles (col. 4, lines 44-45). Therefore the 'gaming area' or template database is scaled to a smaller overall size of the real world size of the area. As stated above, the system is able to manipulate or transform the size,

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position, rotation, etc of roads, creeks, railroads, streets, etc. based on the control functions (col. 8, lines 14-21). Furthermore, another example of a calculated parameter is the view of the area displayed to the player is calculated every time the altitude, pitch and direction of the plane is changed. Therefore the geographic aspect of the imaginary locale is consistent to the parameter and stored in a systems RAM (fig. 40) or the frame buffer (fig. 34).

3. Regarding claim 28, Graf discloses that a person or end user can manually search the object library for bushes, trees, mountains (col. 10, lines 7-10) and place them in the 'gaming area' (col. 7, lines 1-8) or template database. Therefore the system provides programming tools that allow the users to create their own scenarios for play.

4. Regarding claims 7-8 & 10-11, Graf discloses the surface library containing different road surfaces (col. 5, lines 50). The scenes are created either by the computer or a manual operator (col. 10, lines 7-10; col. 7, lines 1-8) therefore a scene can consist of roads of different widths and shaped in any direction the user or computer sees fit. In regards to road alignment or a ground plan, the scenes show the course of a road therefore this claim limitation is also incorporated in the art.

5. Regarding claims 38-41, a template database is a smaller version of the source database. The art also inherently incorporates insuring the integrity of the transformed data when the environment is manipulated through skewing, rotation or scaling otherwise the system would not work properly causing the player to lose their perspective in the playing field. Therefore the art discloses all of the claimed road transformations. A plane ascends and descends or changing its altitude causes the vertical ordering of the roads to alter. When a plane changes directions the roads are transformed rotationally and forward motion of the same plane causes horizontal transformations. Road connectivity is also maintained during a transformation of the environment because if it wasn't then the player is not interacting with the same environment.

**Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Lechner (2003/0059743 A1).**

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6. Lechner discloses a system that automatically generates a terrain model for displaying a predefined mission route (Abstract). The pilot defines the mission route and would use the system disclosed by Lechner to practice their mission (par. 2, lines 1-13). Once a mission is defined by the pilot, a terrain model designer flies out to the real world area to obtain images of the mission terrain (par. 6, lines 1-4) and its surrounding area based on the route and the characteristics of the aircraft like the turning radius and sensor range (par 3, lines 1-11). The model designer takes the terrain data and inputs it into the terrain engine (par. 9, lines 1-2) to create terrain models (par. 54, lines 1-2). Lechner discloses that the military or a commercial airline company (par. 29, line 6-7) pilot defines the mission routes and since the pilot and terrain model designer are always in communication with each other to properly create the simulation it follows that they both work for the same employer: the military or a commercial airline company. Therefore one group or party, "The Boeing Company" creates the system and another group or party collects the terrain or geographic database. The prior art inherently incorporates the selling of the flight simulator or computer game since it is disclosed that the military is a possible user and "The Boeing Company" created the system. Therefore in order for the military to obtain the system "The Boeing Company" would have to sell it to them. Furthermore, an inherent property of using information stored in a database is to separate and organize as much of the necessary information as possible into a smaller database to allow a program to access the information as quickly as possible. This process is known as caching and every processor's cache system is considered a database. Therefore every time a test simulation is in progress it is a smaller version of the real world database that was sold.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 6, 9, 17-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf et al. (US 4,645,459) in view of Huston et al. (US 6,146,143).**

7. The above description of the invention disclosed by Graf & the limitations they pertain too are considered with in this art rejection as well. Graf discloses a vehicle simulator and uses the example of an aircraft simulator to describe the invention. However Graf is silent about simulating a ground vehicle like a car or motorcycle as a possible application for the system (Graf: col. 1, lines 15-17).

8. Houston discloses a ground vehicle simulator able to create a traffic event on a roadway during various types of weather conditions (Houston: Abstract). The system can create various types of roads: highways, rural roads, city streets, etc and accurately simulate the features associated with these roads (Houston: col. 4, lines 44-49) like the density, shape, and width of the road. Houston also discloses lane dividers (Houston: Fig. 7), lane strip markings (Houston: Fig. 6), curbs, sidewalks and crosswalk (Houston: Fig. 6), pavement (Houston: Fig 7), 3D cityscape and landscape (Houston: Fig. 5-7), and fog or clouds (Houston: col. 2, line 50). Houston discloses that the driver must conform to the relevant traffic rules (Houston: col. 5, lines 32-35) and even though traffic signals, signs and speed bumps are not specifically mentioned they are items that are associated with the roads (Houston: col. 4, lines 44-49), which are necessary to test the user's knowledge of the traffic laws and etiquette. It would have been obvious to one of ordinary skill in the art to combine the teaches of Houston about the necessary items needed to simulate a ground vehicle into the system disclosed by Graf in order to further expand on the possible applications for the Graf system.

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9. Regarding claim 9, Houston discloses a 'highway' as a possible road for simulation (Houston: col. 1, lines 44-49). An expressway is a wide highway with a high speed limit, therefore the prior art also teaches this claim limitation.

10. Regarding claim 19, Houston discloses a pavement (Houston: Fig 6-7), however fails to mention anything about the pavement's color. It would have been obvious to one of ordinary skill to color the pavement to help the driver further distinguish the road from the sidewalk and identify the dividers (Fig. 7).

11. Regarding claims 19 and 22, Houston discloses images of a city and mentions simulating roads of various kinds in a realistic manner. However is silent about displaying lampposts, fences, shrubbery, and lawns. It would have been obvious to one of ordinary skill in the art to include these items when the system is simulating a road in the suburbs.

**Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf et al. (US 4,645,459) in view of one of ordinary skill.**

12. The above description of the invention disclosed by Graf and the limitations they pertain too are considered with in this art rejection as well. Graf discloses a computer or manual operator generating the scenes that can contain a variety of objects that represent nature: trees, lakes, bushes, etc. Therefore a person or a computer has the means to display a park. However the prior art fails to disclose displaying a golf course. It would of have been obvious to one of ordinary skill in the art to include a sand trap object in the 2D surface library to further expand the systems ability to create diverse environments.

### ***Response to Arguments***

13. Applicant's arguments filed on August 21, 2007 have been fully considered but they are not persuasive. The examiner disagrees with the argument that the prior art fails to modify a real-world database into an imaginary-world database. As stated above through the explanation of the Graf

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reference, the template database is a smaller version of the actual geographic database. Several different modifications like scaling, rotational, skewing (a blur effect at the edge of the world) and positioning of objects occur as a result of every motion of the plane causes a geographic parameter calculation of the real-world data to create the template data. Therefore the art teaches all of the claim elements.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian E. Rendón whose telephone number is 571-272-3117. The examiner can normally be reached on 9 - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CER

Christian E Rendón  
Examiner  
Art Unit 3714



ROBERT E. PEZZUTO  
SUPERVISORY PRIMARY EXAMINER